

## WHAT IS CLAIMED IS:

1. A device for use as a readily portable device for intermittent compression of human extremities for assisting the return of body fluid in the direction of the heart, characterized by the combination of the following features;
- a) the device comprises a cuff to be applied to an extremity and
  - b) a miniature pressure generator for intermittent pressurization of the cuff,
  - c) said cuff (2) comprising, in the direction of return, a width (B) of only 25 cm at the most and
  - d) being configured as a single-chamber system.
2. The device as set forth in claim 1, characterized in that said cuff (2) corresponds to a cuff as used for blood pressure measurements.
3. The device as set forth in any of the preceding claims, characterized in that said pressure generator (1) is a roller pump.
4. The device as set forth in any of the preceding claims, characterized by a pressure control means, which connects a cuff chamber to the atmosphere when the pressure therein exceeds a predefined overpressure.
5. The device as set forth in claim 4, characterized in that said pressure control means comprises an outlet valve (21, 22) forming an overpressure outlet for said cuff (2), said overpressure outlet being permanently open, except when said pressure generator (1) pressurizes said cuff (2).
6. The device as set forth in any of the preceding claims, characterized in that said pressure control means comprises a restrictor (6b) in a conduit (6) between said pressure generator (1) and said cuff (2), and an outlet valve (21, 22) with a stopper (22), which, in a first position, releases an outlet (21) to the atmosphere, and, in a second position,

blocks said outlet, said stopper (22) assuming these positions as a function of the difference in pressure between an inlet and an outlet of said restrictor (6b).

7. The device as set forth in any of the preceding claims, characterized in that a controller (5) switches said pressure generator (1) ON/OFF, thereby pressurizing said cuff (2) with a defined or definable pressure amplitude and a defined or definable repetition frequency.

8. The device as set forth in claim 7, characterized in that said controller (5) is designed to vary said pressure amplitude and/or repetition frequency.

9. The device as set forth in any of the preceding claims, characterized in that the measured overpressure, compared to atmospheric pressure, ranges between 20 mm Hg and 100 mm Hg.

10. The device as set forth in any of the preceding claims, characterized in that said cuff (2) is pressurized 1 to 10 times per min.

11. The device as set forth in any of the preceding claims, characterized in that said cuff (2) is pressurized 1 to 15 times per 5 min.

12. The device as set forth in any of the preceding claims, characterized in that said pressure generator (1) can be uncoupled from said cuff (2), preferably by means of a quick-release fastener.

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A2

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D1